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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,635	07/11/2001	Hugo Remi Michiels	MICH3001/JEK	7901

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ALEXANDRIA, VA 22314

EXAMINER

NI, SUHAN

ART UNIT	PAPER NUMBER
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2643

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DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/901,635	MICHELIS, HUGO REMI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Suhan Ni	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in Paper No. 5, on 10/10/2001.
2. This communication is responsive to the application filed 07/11/2001.

***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 13, 15 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 13, the limitation of "the groove or grooves extend over the entire thickness of the membrane" in lines 1-2 is vague since a groove usually has a bottom portion, and the claimed groove would be no longer existed if the depth of the "groove" extends over the entire thickness of the membrane.

Regarding claim 13, the limitation of "or such" in line 3 is indefinite since it is not clear what the limitation is.

Regarding claim 15, it recites the limitation “the housing” in line 1. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 19, the limitation of “U-shaped cross-section” in line 2 is indefinite because it is not clear how the cross-section can be both “L” and “U” shaped.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-11, 13-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Azima et al. (US-6,332,029).

Regarding claim 1, Azima et al. disclose a transducer, comprising: a piezoelectric disk (9) and a membrane (2) formed of a material attenuating sound vibrations.

Regarding claims 2-7 and 9 Azima et al. further disclose the transducer, wherein the membrane is formed a soft material (col. 24, lines 1-25) as claimed.

Regarding claim 8, Azima et al. further disclose the transducer, wherein the piezoelectric disk is glued onto the membrane (16) as claimed.

Regarding claims 10-11 and 13, Azima et al. further disclose the transducer, wherein the membrane is provided with a groove (3).

Regarding claim 14, Azima et al. further disclose the transducer, wherein the membrane has a circumferential edge (Fig. 1) connected to a frame (1) as claimed.

Regarding claims 15-16, Azima et al. further disclose the transducer, wherein the membrane has been configured as a part of a housing (Fig. 27) as claimed.

Regarding claims 17-18, Azima et al. further disclose the transducer, wherein the membrane is engaged to a suspension frame (1, 3) as claimed.

Regarding claim 20, Azima et al. further disclose the transducer, wherein a frequency filter (25) is engaged to the transducer as claimed.

6. Claims 1, 10-11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Azima et al. (US-6,377,695).

Regarding claim 1, Azima et al. disclose a transducer, comprising: a piezoelectric disk (5) and a membrane (1) formed of a material attenuating sound vibrations.

Regarding claims 10-11 and 13, Azima et al. further disclose the transducer, wherein the membrane is provided with a groove (7) as claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (US-6,332,029) or (US-6,377,695).

Regarding claim 12, Azima et al. do not clearly teach a depth of the suspension groove as claimed. Since Azima et al. do not specially restrict the configuration of the suspension groove, and do clearly suggest to provide the panel speaker in many applications, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a suitable membrane with a desirable suspension groove, such as a depth of 90% of the membrane for the panel speaker, in order to provide a suitable panel speaker for certain applications.

8. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (US-6,377,695).

Regarding claims 17-18, Azima et al. do not clearly teach a suspension frame as claimed. Since providing a suitable suspension frame for a panel speaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a desirable suspension frame, such as a L shaped for the membrane of the transducer, in order to utilize the transducer for specific applications.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.

Suhan Ni

June 1, 2003

**SUHAN NI**  
**PATENT EXAMINER**  
*Suhan Ni*